ENGINEERING EVALUATION
Xoma (US) LLC; PLANT 14263
APPLICATION 5034

BACKGROUND

Xoma (US) LLC has applied for a permit for a new diesel engine (S-1) used to power a standby generator. This engine will be on site on or after September 1, 2001. Hence, the engine requires an authority to construct. S-1 is subject to New Source Review requirements (BACT, cumulative increase, offsets, public notification requirements triggered by proximity to a K-12 school, and toxic review.)

In accordance with District Regulation 9-8 and the Risk Management Policy, the operation of the S-1 engine will be limited to the lesser of requested operation, no more than 100 hr/yr for reliability-related operation (maintenance and testing) and a reliability-related operating allowance which results in an incremental cancer risk of no more than 1 in a million or 10 in a million if engine PM10 emissions are less than 0.15 grams per brake-horsepower hour. The operation of S-1 to provide power during emergencies will not be limited.

EMISSIONS

The engine permitted under this application is considered a new source. Consequently, there is a cumulative emission increase associated with this permit application. The cumulative increase, except for sulfur dioxide, is calculated using the attached Excel spreadsheet(s) using the CARB certified ISO 8178 D2 Cycle emission factor limits times the maximum horsepower output for the engine times 29 hours of allowable operation per year for reliability-related operation divided by 907,200 grams per ton. The emissions of sulfur dioxide were calculated assuming the fuel contains 0.05% sulfur by weight. The cumulative increase is summarized below:

Cumulative Increase
NOX = 57 lb/yr = 0.029 tpy
CO = 7 lb/yr = 0.004 tpy
HC = 3 lb/yr = 0.002 tpy
PM10 = 2.2 lb/yr = 0.001 tpy
SO2 = 2 lb/yr = 0.001 tpy

TOXIC RISK SCREENING ANALYSIS

As discussed on page 1 (Background), S-1 **is** subject to the District Risk Management Policy for Diesel-Fueled Engines. For 29 hours of reliability-related operation, the incremental cancer risk is less than 1 in a million, which satisfies the risk management policy.

STATEMENT OF COMPLIANCE

An emergency standby engine is not subject to NOx and CO standards in Regulation 9, Rule 8 but is subject to Sections 330 and 530 limiting reliability-related activities and requiring a non-resettable totalizing meter and a monthly log of usage. These limits are included as permit conditions. S-1 is subject to the SO2 limitations of 9-1-301 (ground-level concentration) and 9-1-304 (0.5% by weight in fuel). Compliance with both of these requirements is very likely since diesel fuel with a 0.05% by weight sulfur is mandated for use in California. Like all sources, S-1 is subject to Regulation 6 ("Particulate and Visible Emissions"). This engine is not expected to produce visible emissions or fallout in violation of this regulation and will be assumed to be in compliance with Regulation 6 pending a regular inspection.

The project is considered to be ministerial under the District's CEQA Regulation 2-1-311 because it is evaluated in accordance with Chapter 2.3 of the Permit Handbook and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors and therefore is not discretionary as defined by CEQA.

The project is less than 1000 feet from the nearest school, Emery Middle School Academy and is therefore subject to the public notification requirements of Regulation 2-1-412. A public notice was mailed on ***TO BE DETERMINED. ADD SUMMARY OF COMMENTS RECEIVED AND RESPONSES PRIOR TO FINALIZING EVALUATION.***

As discussed on page 1 (Background), S-1 complies with the District Risk Management Policy for diesel-fueled engines.

PSD, NSPS and NESHAPS are not applicable to this source.

BACT and Offsets

Total facility emissions, including this project, will be less than 15 tons per year of POC and NOx. Therefore, offsets are not required per Offset Requirements (2-2-302).

S-1 is subject to BACT for NOx. The current BACT for NOx is 6.9 g/hp-hr and the CARB-certified NOx emission of 7.3 g/kw-hr (5.4 g/hp-hr) satisfies BACT.

PERMIT CONDITIONS

See attached permit condition number 19928. This permit condition is essentially standard permit condition number 19533 with the number of hours of reliability related operation limited to 29 hours in any calendar year.

RECOMMENDATION

Issue Authority to Construct to Xoma (US) LLC for:

S-1 Emergency Generator, 105 kW, Katolight D105FPJ4 w/John Deere 6068TF150 Diesel Engine, 165 HP

By: _____

Donald P. Van Buren, PE
Air Quality Engineer II